

Claims

1. An image adjusting method for adjusting image forming positions of color component images so that a plurality of color component images are overlaid favorably, comprising:
 - forming images based on each of a plurality of color components;
 - transferring the formed images on each transfer medium to form an image quality determining image;
 - detecting the density of the formed image quality determining image;
 - determining the image quality of the image quality determining image on the basis of the detected density;
 - forming an adjustment image by overlaying and transferring an image of other color component to be adjusted to a reference image of a reference color component out of the plurality of color components, on the transfer medium;
 - detecting the density of the formed adjustment image; and
 - adjusting the image forming position of the other color component on the basis of the detected density, wherein
 - the adjustment image is formed after forming the image quality determining image.
2. The image adjusting method of claim 1, wherein
 - the adjustment image is formed after determining the image quality of the image quality determining image.

3. The image adjusting method of claim 1, wherein the image quality determining image is formed by arranging a plurality of images of other color components to be adjusted at a first interval individually with being overlaid on the image of the reference color component.

4. The image adjusting method of claim 3, wherein the adjustment image is formed by overlaying the plurality of images to be adjusted on the plurality of reference images arranged and formed at a second interval, and the first interval is equal to the second interval.

5. The image adjusting method of claim 3, wherein the image quality determining image includes a portion formed only of the image of the reference color component.

6. The image adjusting method of claim 3, wherein the adjustment image is not formed when the result of determining the image quality of the image quality determining image does not reach a specified image quality.

7. An image adjusting method for adjusting image forming positions of color component images so that a plurality of color component images are overlaid favorably, comprising:

receiving information telling it necessary to adjust the image forming position of each color component image;

determining whether or not to execute a detection process for detecting the forming state of each color component image when receiving the information;

forming a detection image for detecting the forming state of each color component image when it is determined to execute the detection process;

executing the detection process on the basis of the formed detection image;

forming an adjustment image for adjusting the image forming position of each color component image; and

adjusting the image forming position of each color component image on the basis of the formed adjustment image.

8. The image adjusting method of claim 7, wherein the determination of whether or not to execute the detection process is determined on the basis of the elapse of time after execution of the detection process.

9. An image forming apparatus for forming an image by overlaying a plurality of color component images, comprising:

a plurality of image forming units for forming images based on each of a plurality of color components;

a plurality of transfer units for transferring the images formed

by the image forming units on a transfer medium to be overlaid;

a detection unit for detecting the density of an image quality determining image formed by transferring on the transfer medium by each transfer unit;

an image quality determining unit for determining the image quality of the image quality determining image on the basis of the density detected by the detection unit; and

an adjustment unit for adjusting the image forming positions of other color components on the basis of the density detected by the detection unit as the detection unit detects the density of the adjustment image formed by transferring the image of other color to be adjusted to the reference image of the reference color component out of the plurality of color components, on the transfer medium by each transfer unit, wherein

each transfer unit forms the adjustment image after forming the image quality determining image.

10. The image forming apparatus of claim 9, wherein
each transfer unit forms the adjustment image successively
after the image quality determining unit determines the image quality.

11. The image forming apparatus of claim 9, wherein
the image quality determining image is formed by arranging a
plurality of images of other color components to be adjusted at a first
interval individually with being overlaid on the image of the reference

color component.

12. The image forming apparatus of claim 11, wherein the adjustment image is formed by overlaying the plurality of images to be adjusted on the plurality of reference images arranged and formed at a second interval, and the first interval is equal to the second interval.

13. The image forming apparatus of claim 11, wherein the image quality determining image includes a portion formed only of the image of the reference color component.

14. The image forming apparatus of claim 9, wherein each transfer unit does not form adjustment image when the result determined by the image quality determining unit does not reach a specified image quality.

15. An image forming apparatus for forming an image by overlaying a plurality of color component images, comprising:
a receiving unit for receiving information telling it necessary to adjust the image forming position of each color component image;
a determining unit for determining whether or not to execute a detection process for detecting the forming state of each color component image when the receiving unit receives the information;
a first forming unit for forming a detection image for detecting

the forming state of each color component image when it is determined to execute the detection process;

an executing unit for executing the detection process on the basis of the formed detection image;

a second forming unit for forming an adjustment image for adjusting the image forming position of each color component image; and

an adjusting unit for adjusting the image forming position of each color component image on the basis of the formed adjustment image.

16. The image forming apparatus of claim 15, further comprising:

a control unit for controlling the forming condition of each color component image; and

a determining unit for determining whether or not to control the forming condition on the basis of the result of execution of the detection process.

17. The image forming apparatus of claim 15, further comprising:

a clock unit for measuring the elapse of time after execution of the detection process, wherein

the determining unit determines on the basis of the measured elapse of time.

18. The image forming apparatus of claim 15, further comprising:

a counting unit for counting the number of times of forming image, wherein

the determining unit determines on the basis of the counted number of times.

19. The image forming apparatus of claim 15, further comprising:

a measuring unit for measuring the temperature or humidity at the time of image forming, wherein

the determining unit determines on the basis of the measured temperature or humidity.

20. The image forming apparatus of claim 15, further comprising:

a counting unit for counting the number of times of turning on a power source to be supplied, wherein

the determining unit determines on the basis of the counted number of times.

21. The image forming apparatus of claim 15, wherein
the detection image is an image formed by overlaying a lattice image of other color component on an image of one color component.

22. The image forming apparatus of claim 15, wherein the adjustment image is an image formed by overlaying lattice images of color components.